

## Discrete Mathematics.

- Unit-1) Predicate Calculus
  - Unit-2) Relations and Lattice
  - Unit-3) Graph Theory.
- } Yogeshwari Ma'am
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- Unit-4) Recurrence Relations
  - Unit-5) Abstract Algebra
  - Unit-6) Linear Algebra.
- } Bina Ma'am
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## Data Structures and Algorithms.

- Unit-1) Introduction to Data Structures
- Unit-2) Linear Data Structure [LinkedList, Stack, Queue]
- Unit-3) Non-Linear Data Structure [Tree, Heaps, Graphs]
- Unit-4) Sorting [Bubble, Selection, Insertion, Merge, Quick, Radix, Heap, Counting, Topological Sortings]
- Unit-5) Searching [Linear, Binary]
- Unit-6) Dictionaries [Hashing, Hashing func.<sup>n</sup>, Collision - Resolution techniques, Applications]



# Microprocessor and Computer Organization

Unit-1) Register Transfer and Microoperations

Unit-2) Basic Computer Organization and Design

Unit-3) Central Processing Unit

Unit-4) Pipeline and Vector Processing.

Unit-5) Computer Arithmetic

Unit-6) Memory Organization

Unit-7) 8086, 80186, 80286, 80386 Processors

Unit-8) Current Era of Microprocessors.

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## Java Programming

Unit-1) Fundamental of Programming in Java

Unit-2) Class Fundamentals

Unit-3) Array & String Handling

Unit-4) Inheritance, Interfaces & Packages

Unit-5) Exception Handling

Unit-6) Multithreaded Programming

Unit-7) File I/O and NIO

Unit-8) Java Collection Frameworks and  
Generics